AMENDMENTS TO THE CLAIMS

1. (currently amended) An optical information recording medium storing information which can be reproduced by irradiation of a light beam, comprising:

a temperature responsive layer ~~containing~~ consisting of a zinc oxide film whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam.

2. (original) The optical information recording medium as set forth in claim 1, wherein:

the reflectance and/or the transmittance of the temperature responsive layer changes by an interference effect between a reflection light of the light beam reflected on one face of the temperature responsive layer and a reflection light of the light beam reflected on the other face of the temperature responsive layer.

3. (previously presented) An optical information recording medium storing information which can be reproduced by irradiation of a light beam comprising:

a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam and arranged so that a low transmittance wavelength domain generated by absorption of a shorter wavelength side at an ordinary temperature includes a wavelength of a reproduction light beam, and the low transmittance wavelength domain is shifted toward a longer wavelength side by a certain degree of rise in temperature of the temperature responsive layer, so that a spectral transmittance and/or a spectral reflectance with respect to the wavelength of a reproduction light beam decreases.

4. (cancelled)

5. (cancelled)

6. (original) The optical information recording medium as set forth in claim 1, wherein:

the reflectance and/or the transmittance of the temperature responsive layer changes by not less than ±2% in a certain wavelength domain within a temperature range for reproducing the information.

7. (original) The optical information recording medium as set forth in claim 1, wherein:

the temperature responsive layer enables reproduction of a minute recording mark less than a diffraction limit of a reproduction light beam, by a change in reflectance and/or transmittance for a light beam with a change in temperature.

8. (original) The optical information recording medium as set forth in claim 1, wherein:

the transmittance of the temperature responsive layer decreases with a rise in temperature.

9. (original) The optical information recording medium as set forth in claim 1, further comprising:

a substrate having a surface formed in a concave-convex state by providing pits and grooves corresponding to recorded information; and

a reflection layer formed on the substrate,

wherein:

the temperature responsive layer is formed on the reflection layer.

10. (currently amended) An optical information recording medium for storing information and for allowing reproduction of the information by irradiation of a light beam, comprising:

a temperature responsive layer ~~containing~~ consisting of a zinc oxide film whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam.

11. (original) The optical information recording medium as set forth in claim10, wherein:

the reflectance and/or the transmittance of the temperature responsive layer changes by an interference effect between a reflection light of the light beam reflected on one face of the temperature responsive layer and a reflection light of the light beam reflected on the other face of the temperature responsive layer.

12. (previously presented) An optical information recording medium comprising:

a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam is arranged so that a low transmittance wavelength domain generated by absorption of a shorter wavelength side at an ordinary temperature includes a wavelength of a reproduction light beam, and the low transmittance wavelength domain is shifted toward a longer wavelength side by a certain degree of rise in temperature of the temperature responsive layer, so that a spectral transmittance and/or a spectral reflectance with respect to the wavelength of a reproduction light beam decreases.

13. (cancelled)

14. (cancelled)

15. (original) The optical information recording medium as set forth in claim 1, wherein:

the reflectance and/or the transmittance of the temperature responsive layer changes by not less than ±2% in a certain wavelength domain within a temperature range for reproducing the information.

16. (original) The optical information recording medium as set forth in claim 1, wherein:

the temperature responsive layer enables reproduction of a minute recording mark less than a diffraction limit of a reproduction light beam, by a change in reflectance and/or transmittance for a light beam with a change in temperature.

17. (original) The optical information recording medium as set forth in claim 10, wherein:

the transmittance of the temperature responsive layer decreases with a rise in temperature.

18. (original) The optical information recording medium as set forth in claim10, further comprising:

a reflection layer; and

the recording layer formed on the reflection layer,

wherein:

the temperature responsive layer is formed on the recording layer.

19. (withdrawn) A reproduction method by irradiation of a light beam for reproducing information recorded on an optical

information recording medium having a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, the temperature responsive layer enabling reproduction of a minute recording mark less than a diffraction limit of a reproduction light beam.

20. (withdrawn) A reproduction method for reproducing information recorded on an optical information recording medium having a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, comprising the steps of:

irradiating the optical information recording medium with a light beam so that a high temperature section and a low temperature section are generated in a light beam spot of the temperature responsive layer, and the transmittance of the temperature responsive layer decreases in the high temperature section; and

reproducing the information with a light transmitted through the low temperature section of the temperature responsive layer.

21. (withdrawn) A reproduction method for reproducing information recorded on an optical information recording medium having a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, comprising the steps of:

irradiating the optical information recording medium with a light beam so that a high temperature section and a low temperature section are generated in a light beam spot of the temperature responsive layer, and the transmittance of the temperature responsive layer decreases in the low temperature section; and

reproducing the information with a light transmitted through the high temperature section of the temperature responsive layer.

22. (withdrawn) A recording method by irradiation of a light beam for recording information onto an optical information recording medium having a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, the temperature responsive layer enabling recording of a minute recording mark less than a diffraction limit of a recording light beam, by a change in reflectance and/or transmittance for a light beam with a change in temperature.

23. (withdrawn) A recording method for recording information onto an optical information recording medium having a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, comprising the steps of:

irradiating the optical information recording medium with a light beam so that a high temperature section and a low temperature section are generated in a light beam spot of the temperature responsive layer, and the transmittance of the temperature responsive layer decreases in the high temperature section; and

heating a recording layer with a light transmitted through the low temperature section of the temperature responsive layer.

24. (withdrawn) A recording method for recording information onto an optical information recording medium having a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, comprising the steps of:

irradiating the optical information recording medium with a light beam so that a high temperature section and a low temperature section are generated in a light beam spot of the temperature responsive layer, and the transmittance of the temperature responsive layer decreases in the low temperature section; and

heating a recording layer with a light transmitted through the high temperature section of the temperature responsive layer.

25. (withdrawn) An optical information reproduction device, comprising:

an optical information recording medium;

a light irradiator for irradiating the optical information recording medium with a light beam; and

a light detector for detecting a reflection light,

wherein:

the optical information recording medium includes a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a light beam, and the light irradiator and the light detector are arranged to enable reproduction of a minute recording mark less than a diffraction limit of a reproduction light beam.

26. (withdrawn) An optical information recording device, comprising:

an optical information recording medium; and

a light irradiator for irradiating the optical information recording medium with a light beam,

wherein:

the optical information recording medium includes a temperature responsive layer whose reflectance and/or transmittance changes with a change in temperature caused by the irradiation of a

light beam, and the light irradiator is arranged to enable recording of a minute recording mark less than a diffraction limit of a reproduction light beam.